



INTERNATIONAL YEAR OF
ASTRONOMY
2009



SFA
SOCIÉTÉ FRANÇAISE
D'ASTRONOMIE &
D'ASTROPHYSIQUE

INTERNATIONAL YEAR OF ASTRONOMY 2009

Opening Ceremony
Paris, 15–16 January 2009



International Year of Astronomy 2009

Opening Ceremony Paris, 15–16 January 2009 UNESCO

Message from UNESCO Director-General

As lead UN agency for the Year, UNESCO will work with the International Astronomical Union and other partners to make the initiative a success. In particular, we will encourage citizens of the world, especially young people, to learn more about the Universe in which we live and to explore the links that astronomy provides between the scientific and cultural spheres.

UNESCO's Member States give high importance to science education as a driver of sustainable development and economic growth. Astronomy, the 'first science', teaches us about the basic sciences – mathematics, physics – which are fundamental to understanding the Universe, its stars and planets, including the Earth. The UNESCO Space Education Programme encourages the introduction of astronomy and other space-related subjects into the school curriculum and will implement activities that enhance knowledge in these fields through the IYA2009 Cornerstone Projects.

Under the World Heritage and Astronomy Initiative, UNESCO works to raise awareness of the importance of astronomical heritage worldwide, in terms of its enrichment of human history, the promotion of cultural diversity and the enhancement of international exchange. From World Heritage sites such as the ancient Neolithic monuments of Stonehenge, to the most recent Large Hadron Collider experiment led by the European

Organization for Nuclear Research (CERN) which aims to throw light on the origin of the Universe, people have always looked to the sky for answers to the questions 'How did we get here' and 'Why are we here'.

The sky belongs to everybody. Astronomy is and can be an instrument to promote peace and understanding among nations and as such is at the heart of UNESCO's mission. I wish all of you every success for the Year.

Koichiro Matsuura



Message from IAU President

Dear friends, colleagues and astronomy enthusiasts,

Welcome to the International Year of Astronomy 2009! It has taken many years of planning and organising, but we are finally ready to embark on what is destined to be a year full of discovery and wonder.

The International Astronomical Union launched 2009 as the International Year of Astronomy (IYA2009) under the theme, The Universe, Yours to Discover. IYA2009 marks the 400th anniversary of the first astronomical observation through a telescope by Galileo Galilei. Proclaimed by the UN and endorsed by UNESCO, IYA2009 has already captured the imagination of countless individuals.

This Opening Ceremony will certainly launch the Year in style. There are representatives present from over 100 countries, including students specially selected to attend. Nobel prize winners and top scientists are on hand to lend their expertise, and we will even have a live video conference with the European Very Large Telescope in Chile, to hear from researchers at the cutting-edge of science.

This ceremony, and indeed the entire IYA2009, would not have reached this stage without the support of thousands of groups and individuals around the world. In particular, I would like to thank our Global Sponsors, Thales Alenia Space and Celestron, whose belief in IYA2009 has been unwavering.

I would also like to take this opportunity to give thanks to the many Organisational Associates who have pulled together to make the Year possible. Our Media Partners have been busy helping to spread the message of IYA2009 far and wide, so I offer my sincere thanks to them.

Astronomy is one of the oldest fundamental sciences, yet continues to make a profound impact on our culture and is a powerful expression of the human intellect. This is the year in which we can all make a difference, popularising astronomy as never before and bringing it to the masses. Remember that this Opening Ceremony is merely the beginning; the best is yet to come. The International Year of Astronomy 2009 is yours to discover!

Catherine Cesarsky

Programme

Thursday, 15 January

8 a.m. – 9 a.m. Registration and open visit to the exhibitions in the Miro Hall

Morning session

9 a.m. – 10.15 a.m. – Inauguration

- Opening remarks by UNESCO Director-General, Mr. Koichiro Matsuura
- International Year of Astronomy: Vision and Goals by Mrs. Catherine Cesarsky, President, International Astronomical Union
- Remarks by Reynald Seznec, President and CEO of Thales Alenia Space
- Greetings by government ministers and important personalities

10.15 a.m. – 10.45 a.m. Coffee break

10.45 a.m. – 12 p.m. Astronomy: History and Culture

Chair: Jean-Claude Carrière — Anderson

- The Skies of the World, a Multicultural Experience, Franco Pacini (Italy)
- The First Astronomers: Astronomy over Four Millennia, Juan Antonio Belmonte (Spain)
- Mayan Astronomy, Julieta Fierro (Mexico)
- Islamic Astronomy, George Saliba (USA)
- Astronomical Exploration and the Public Imagination, Baruch Blumberg (USA)

12 p.m. – 12.30 p.m. From Galileo (400 years) to Apollo (40 years)

Chair: Jean-Claude Carrière

- From Galileo to Einstein, Françoise Balibar (France)

12.30 p.m. – 2 p.m. Lunch break

Afternoon session

2 p.m. – 3 p.m. (continuation of From Galileo (400 years)...))

Chair: Tim de Zeeuw

- The New Frontier: The Exploration of the Solar System, André Brahic (France)
- Echoes of Creation: Discovery of the Big Bang Fossil Radiation, Robert Wilson (USA)

3 p.m. – 3.30 p.m. Modern Astronomy: Discoveries on our Origins

- From a "simple" beginning to our complex cosmos, Lord Martin Rees (UK)

3.30 p.m. – 4 p.m. Coffee break

4 p.m. – 5.30 p.m. (continuation of Modern Astronomy...))

Chair: Jan Palous

- A Multitude of Worlds: Extrasolar planets, Michel Mayor (Switzerland)
- IYA2009: Astronomy for Humankind, Cornerstones and Universe Awareness, Kevin Govender (South Africa)
- Video and news from the South Pole Concordia Research Station, presented by Yves Frenot, Institut Paul Emile Victor (France)

Evening

7.30 p.m. – 9.30 p.m. Reception at the Palais de la Découverte

- Video clip of "Around the World, Around the Sky" by Robert Pansard-Besson (France)
- Film of the Adler Planetarium presented by José-Francisco Salgado (USA) with the music "The Planets" by G. Holst



Eagle Nebula
(NASA-ESA Hubble Space Telescope)

Friday, 16 January

8.30 a.m. – 9.00 a.m. Open visit to the exhibitions in the Miro Hall

Morning session

9.00 a.m. – 9.30 a.m. Video-conference with work stations

Chair: Beatriz Barbay

- Live video-conference with astronomers in the European Very Large Telescope in Paranal, Chile
- Virtual visit of the European Southern Observatory (ESO) and imaging session using one of the 8m telescopes

9.30 a.m. – 10.30 a.m. (continuation of Modern Astronomy...)

- The Biggest Question of All: The Search for Extraterrestrial Life, André Brack (France)
- The Question of Parallel Universe, Hubert Reeves (Canada)

10.30 a.m. – 11 a.m. Coffee break

11 a.m. – 12.30 p.m. Stars: Life and Death

Chair: Gang Zhao

- Pulsars: Progress and Puzzles, Jocelyn Bell Burnell (UK)
- Beautiful Death for a Star: Planetary Nebulae, Sylvia Torres-Peimbert (Mexico)
- Cosmic Explosions: The Violent Supernovae, Ken'ichi Nomoto (Japan)

12.30 p.m. – 2 p.m. Lunch break

Afternoon session

2 p.m. – 3.30 p.m. Black holes and Space

- Report from the Abyss: Massive Black Holes, Reinhard Genzel (Germany)
- Astronomy from Space: The Hubble and James Webb Space Telescopes, Jonathan Gardner (USA)
- Cosmic Vision, David Southwood (ESA)
- Closing remarks by Walter Erdelen, Assistant Director-General for Natural Sciences, UNESCO

3.30 p.m. – 4 p.m. Coffee break

4 p.m. – 5.30 p.m. Remote observing and VLBI (3 parallel sessions)

- Remote observing in Hawaii with Canada-France-Hawaii Telescope (CFHT)
- HI-21 cm radio observation of the Milky Way with Salsa Telescope in Onsala, Sweden
- Global e-VLBI demonstration
- (One cosmic source will be observed continuously for 24 hours with radio telescopes on 6 continents, streaming data in real time to the correlator in the Netherlands via high-bandwidth fibre networks.)

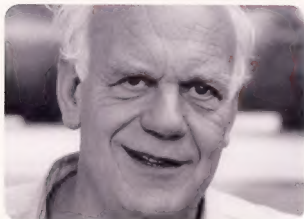
Evening

6 p.m. – 7.30 p.m. Reception at the Foyer of Room I hosted by UNESCO

7.30 p.m. – 9.30 p.m. Cultural event

- "Sun Rings" performance by the Kronos Quartet with the participation of the UNESCO Choir

Speakers



Franco Pacini (Italy)

The Skies Of The World, A Multicultural Experience

People have always been fascinated by the stars and by celestial phenomena. Different civilisations have projected their beliefs, their hopes and fears onto the sky. Astronomy offers various opportunities to promote multicultural respect, especially among children. We shall summarise one particular example of this activity, developed at the Arcetri Astrophysical Observatory in Florence.

Biography

Franco Pacini is Professor of Astrophysics at the University of Florence (Italy) and has carried out research, mostly in high energy astrophysics, in Italy, France, the United States and at the European Southern Observatory. He was Director of the Arcetri Astrophysical Observatory between 1978 and 2001, and President of the International Astronomical Union from 2001 to 2003. He is a member of Accademia Nazionale dei Lincei.

Notably, he predicted the existence of strongly magnetised, rotating neutron stars in 1967, before the discovery of pulsars. Together with Martin Harwit, in 1975, he has also interpreted ultraluminous infrared galaxies as evolutionary stages of massive star formation. He is a strong promoter of astronomical education, especially among children.



Juan Antonio Belmonte (Spain)

The First Astronomers: Astronomy Over Four Millennia

What do the prehistoric dolmens of the Iberian Peninsula, the cyclopean constructions of the ancient Mediterranean islands, the moai of Easter Island or the Egyptian pyramids have in common? Undoubtedly, they all are magnificent structures built with gigantic stones, but they are also linked by the long-term aim of their constructors for a correct orientation in time and space. Astronomy was the simplest tool to achieve that purpose. In our short presentation, we will provide a few sketches of how humanity has looked at the sky for thousands of years to create calendars or to orient sacred buildings appropriately, in an ongoing search for the metaphysical aspects of life, death and renewal.

Biography

Dr. Juan Antonio Belmonte Avilés is an astronomer at the Instituto de Astrofísica de Canarias (Tenerife, Spain) where he has lectured on the history of astronomy and archaeoastronomy, and he carries out research into exoplanets, stellar physics and cultural astronomy. He has published or edited a dozen books and authored nearly 200 publications on those subjects. Currently, he is President of the European Society for Astronomy in Culture (SEAC) and of the Spanish Time Allocation Committee (CAT) of the Canarian observatories. In recent years he has carried out extensive research on the astronomical traditions of ancient civilisations, concentrating on the ancient Mediterranean cultures, notably in Egypt.

He was born in Murcia (Spain) in 1962, graduated in physics from Barcelona University in 1985 and obtained his PhD in astrophysics at La Laguna University in 1989.



Julieta Fierro (Mexico)

Mayan Astronomy

The Mayan culture spread across a vast area, including South-East Mexico and part of Central America. Their society was governed by the demands of seasonal rains and slave-labour, since they had no draft or pack animals. Therefore, they needed a precise and empirical calendar to organise many aspects of their lives, including agriculture, commerce and the siting of buildings.

Mayan astronomers used the Sun and the planets for their calendar. They were especially interested in Venus; evidence suggests that they reported its transit on one of the bas-reliefs at the Mayapan site. They also constructed observatories such as the Caracol to study certain alignments. Ball games and the layout of the ball courts in the area were also linked to astronomical alignments such as the equinoxes. However, the most popular event is the "descent of the serpent" at Chichen-Itza, where a shadow cast by the largest pyramid simulates a snake during the equinoxes.

Biography

Dr Fierro holds a research position at the Astronomy Institute of the Universidad Nacional Autónoma de México. She is dedicated to outreach, and has written 40 popular science books, two of which include topics on Mayan astronomy. She appears every week on television and radio and writes articles on the importance of informal public education. She has received dozens of awards, including the Kalinga Prize for the Popularization of Science at UNESCO in Paris.



George Saliba (USA)

Islamic Astronomy

In this illustrated talk, I will discuss the main astronomical issues that were raised in Islamic civilisation and their critical relationship to the preceding Greek astronomical theory. I will also illustrate the resulting proposed alternatives to Greek astronomy and their impact on European astronomy at the time of the Renaissance. The main focus will deal with the relationship between Copernican and Islamic astronomy, which I have already touched upon in my latest book, *Islamic Science and the Making of the European Renaissance, 2007* (Cambridge MA: MIT Press).

Biography

George Saliba is Professor of Arabic and Islamic Science at Columbia University (New York).

Professor Saliba studies the development of scientific ideas from late antiquity up until early modern times, with a special focus on the various planetary theories that were developed within the Islamic civilisation and the impact of such theories on early European astronomy.

His recent research deals with some of the latest findings regarding the transmission of astronomical and mathematical ideas from the Islamic world to Renaissance Europe during the fifteenth and sixteenth centuries.

Speakers



Françoise Balibar (France)

From Galileo To Einstein

Four hundred years ago Galileo Galilei, by pointing his telescope at the Moon and planets in the night sky, and highly influenced by Copernicus's train of thought, made the observations that abolished the previously well-established cosmic separation between the Earth (a place for decay, death and sin) and the Heavens (a world of intrinsic and absolute perfection). As Koyré put it, humanity had taken a definite step towards emancipation — from a closed world, enclosed in a crystal sphere, rotating about a centre, to an infinite Universe, the uniform open expanse of acentric Euclidean space. Mathematics that, up to then, had been restricted to the understanding of the movements of celestial objects became relevant to terrestrial phenomena. Three hundred years later, Albert Einstein, having worked out his general theory of relativity, realised that his theory, first intended as one of gravitation, was in fact a theory of the Universe itself, making cosmology a branch of physics. Trying to carry through Mach's principle in the framework of his theory, Einstein built a static Universe in which matter is evenly distributed, as a possible solution of the mathematical equations of gravitation, provided they include a constant (the so-called cosmological term). This had the effect that this first relativistic model of Universe, although it extends from eternity to eternity, thereby excluding any idea of creation by any transcendental will or power, implies that matter is distributed in a topologically closed three-dimensional space — in contrast to the topologically open Euclidean space provided by Galileo's theory.

So the way from Galileo to Einstein can appear as a return to the closed world from which humanity is supposed to have escaped, with so much sound and fury, three hundred years earlier. As we all know, physics (and therefore humanity) has found a way out of this paradox. There is still a lesson to be learned from this story, a lesson about the way the worldview one inherits is entwined with scientific practice, for better or for worse. A lesson about not being mistaken by the "purity" of scientific knowledge.

Biography

F. Balibar was born in 1941. She is Professor Emeritus in Physics at Paris Diderot University.

She was in charge of the French edition and translation of the selected works of Albert Einstein, *Oeuvres choisies* (6 vol.), 1985-1995, (Paris: Le Seuil/ CNRS). She is a co-author with Jean-Marc Lévy-Leblond of *Quantique Rudiments*, 1st edition, 1984, (Paris: Inter-Editions, now available at Dunod) and translated into English, *Quantics: Rudiments in Quantum Physics*, 1990, (Amsterdam: North Holland). Her most recent book (in collaboration with Raffaella Toncelli) is *Einstein, Newton, Poincaré. Une histoire de principes*, 2008, (Paris: Belin).



André Brahic (France)

The New Frontier: The Exploration Of The Solar System

For the first time in history, we are leaving our terrestrial cradle using robotic space probes. For centuries, the planets of the Solar System were only points of light in the sky. Now, they are revealing many diverse phenomena and an unsuspected wealth of information. Gamma and X-rays, ultraviolet and infrared radiation, radio and millimetre waves, all invisible to our eyes, are now captured by our instruments and we are discovering an active Universe, far from the serene vision of the visible sky. The exploration of the Solar System is a way to a better understanding of our own Earth from comparisons between the planets. We are living through the third major revolution in our knowledge of the sky after those of the Ancient Greeks and the scientific renaissance of the 17th century. Endless comparisons between theory and observations are the only way to progress.

In the 1980s, the giant planets were visited by the Voyager probes, which revealed fascinating worlds. Both spacecraft have now left the Solar System and are moving into interstellar space.

The Cassini-Huygens mission reached Saturn on 1 July 2004 and is currently studying the rings, the satellites and the planet itself showing unexpected geysers on Enceladus, lakes on Titan, mountains on Iapetus, bizarre shapes in the rings, gigantic Saturnian cyclones, strange small satellites, arcs around Saturn and many other wonders.

Now, after centuries of controversy, we have a better understanding of the origin of the planets and are on the eve of discovering other Earths and, maybe, even new kinds of life over the next few centuries.

Biography

André Brahic is a Professor at the University of Paris Diderot and a Senior Scientist at the French Atomic Energy Committee (C.E.A.). He first worked on supernovae, the theory of chaos and galactic dynamics in the 1960s. In the 1970s he proposed the first model of velocity dispersion in Saturn's rings. He discovered the rings of Neptune in 1984. He was a co-investigator of the Voyager missions and he is now a member of the Cassini Imaging Team. He is currently studying planetary rings and the formation of the Solar System.

Over the past 40 years, André Brahic has published more than 200 articles. He is one of the pioneers of French planetology. He has chaired a number of committees associated with space science, culture and education. These include, in the 1990s, chairing the Society of French Professional Astronomers and of the planetologists of the International Astronomical Union. He was a member of the committee in charge of the definition of the word "planet". Thirty years ago his name was given to an asteroid located 2.8 astronomical units from Earth. He has founded three laboratories and has been the thesis advisor for many students. He is known for his active promotion of scientific culture. He has participated in several hundred television shows and radio broadcasts. He is also the author of several books for general readership, including, in 2000, the best-selling *Enfants du Soleil*, translated into eight languages. His last book *Lumières d'Étoiles* was published in 2008 with Isabelle Grenier. Among several awards and honours, he received the Carl Sagan prize in 2000 and the Jean Perrin prize for science communication in 2006.

Speakers



Robert W. Wilson (USA)

Echoes Of Creation: Discovery Of The Big-Bang Fossil Radiation

Prior to the 20th century, cosmology was the study of objects in the Universe, not the physics of the Universe as a whole. In this talk I will briefly review the development of cosmology in the first half of the 20th century. I will then discuss the discovery of the cosmic microwave background radiation by Arno and me at Bell Labs and several near misses, which preceded us. I will close with an overview of the current understanding of our Universe.

Biography

Robert W. Wilson is a Senior Scientist at the Smithsonian Astrophysical Observatory of the Harvard Smithsonian Center for Astrophysics in Cambridge Massachusetts. He is technical leader of the Sub-Millimeter Array, a recently completed 8 element synthesis radio telescope.

Dr. Wilson received a BA from Rice University in 1957 and a PhD from the Caltech in 1962. After a one year postdoc at the Caltech, he joined Bell Laboratories. From 1977 until 1994 Dr. Wilson was Head of the Radio Physics Research Dept. in Holmdel, NJ.

His early work was in the fields of Galactic radio astronomy and precision measurement of radio source strengths. He was a co-discoverer in 1964 of the 3K cosmic background radiation which originated in the Big Bang and for which he shared the 1978 Nobel Prize in Physics. In 1970 he and his co-workers discovered a number of interstellar molecules including carbon monoxide in the 2-3 mm band. This opened up the study of molecular clouds and star-forming regions.

He is a member of the American Astronomical Society, the American Academy of Arts and Sciences, the International Astronomical Union, the International Union of Radio Science, the American Physical Society and the National Academy of Sciences.



Martin Rees (UK)

From A "Simple" Beginning To Our Complex Cosmos

Our Universe started off in a hot, dense and almost uniform state. As it expanded and cooled, the first atoms formed. Structures then emerged, leading to the formation of galaxies, stars and planets. Thanks to the use of ever more powerful telescopes on the ground and in space (allied to more powerful computers) astronomers are starting to understand the properties of the complex cosmos in which we live.

Biography

Martin Rees is Professor of Cosmology and Astrophysics at the University of Cambridge, Astronomer Royal, and President of the Royal Society. He has, with many collaborators, contributed to our understanding of galaxy formation, black holes, cosmology and high energy astrophysics.

The author of more than 500 research papers, Martin Rees has made important contributions to the origin of cosmic microwave background radiation, as well as to galaxy clustering and formation. His studies of the distribution of quasars proved to be a nail in the coffin of the steady state theory. He was one of the first to propose that enormous black holes power quasars. He is also a well-respected author of books on astronomy and science, intended for general readership.

Martin Rees is the winner of a large number of rewards and prizes, among them the Gruber Prize in Cosmology (2001) and the Crafoord Prize in 2005 with James Gunn and James Peebles.

On 22 July 2005, he was elevated to a life peerage, sitting as a crossbencher in the House of Lords. On 6 September, he was created Baron Rees of Ludlow.



Michel G. Mayor (Switzerland)

A Multitude Of Worlds: Extrasolar Planets

The discovery of planets orbiting other stars has opened a new chapter in our understanding of the diversity of worlds in our galaxy. In the past, the only planets known to other systems have been discovered with masses exceeding the range of gas giants. But planets, icy planets and rocky planets. These discoveries have revealed the extraordinary diversity of exoplanets orbiting other stars. Such a diversity has led to a profound revision in the theory of the formation and evolution of planetary systems. In addition, the discovery of planets from various techniques, we have already gained insight into the internal structure of these exoplanets and we are beginning to understand the diversity of the atmospheres. But how are there so many planets similar to our Earth?

Biography

Dr. Michel G. Mayor, born in Switzerland, is a Professor of Astronomy at Geneva University. He is the co-discoverer, with Didier Queloz, of the first extrasolar planet orbiting a Sun-like star, 51 Pegasi, and has discovered more than 100 additional planets and planetary systems. Among his recent discoveries is a planetary system with three Jupiter-Earths.

From 1998 to 2004, he was the Director of the Geneva Observatory. Dr. Mayor is the Principal Investigator of a major scientific program for planets in the Southern Hemisphere of the European Southern Observatory at La Silla, Chile. Part of this program is devoted to the search for Earth-like planets.

Dr. Mayor has served on numerous astronomy committees and boards. In 2010, he was the founding president of the AU Commission on exoplanets. He was the Swiss delegate to the ESO Council from 2009-11, and from 1998-2001, President of the AU Commission 35 on Structure and Dynamics of the Galactic System. He has authored or co-authored several major scientific publications.

Among his many awards and recognitions, he often must be reminded that he is a member of the highest of the French Académie and in 2005, the Royal Society. In 2008, he was named an Associate Fellow of the Royal Astronomical Society. Professor Mayor is a foreign Associate of the French Academy of Sciences.

Speakers



Baruch S. Blumberg (NASA, USA)

the β -phase of the polymer. The β -phase is the more ordered phase and is characterized by a higher density and a higher melting point than the α -phase. The β -phase is also the more stable phase and is the one that is most commonly observed in nature. The α -phase is the less ordered phase and is characterized by a lower density and a lower melting point than the β -phase. The α -phase is also the less stable phase and is the one that is most commonly observed in nature.

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Biography

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Kevin Govender (South Africa)

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Biography

There is a lot of talk about the importance of the Internet, but it is not always clear what is meant by the term. The Internet is a global network of computers that are connected to each other. It is used for many things, such as sending email, downloading files, and browsing the web. The Internet is a very important part of our lives, and it is growing all the time. There are many different ways to use the Internet, and it is always changing. The Internet is a very powerful tool, and it is helping to make our lives better. We should all learn how to use the Internet, and we should all be able to get the most out of it.

Speakers



Hubert Reeves (France)

President of the Académie des Sciences

Hubert Reeves is a French astronomer and astrophysicist. He is best known for his work in the field of cosmology and for his popular science books. He has been a member of the Académie des Sciences since 1985 and has served as its president since 2005. He is also a member of the French Academy of Letters and the French Academy of Medicine.

Biography

Hubert Reeves was born on 10 June 1928 in Paris, France. He studied at the Lycée Henri IV and the Sorbonne University. He worked as a research assistant at the Observatoire de Paris and as a professor at the University of Paris. He has been a member of the Académie des Sciences since 1985 and has served as its president since 2005. He is also a member of the French Academy of Letters and the French Academy of Medicine.

Reeves is known for his work in the field of cosmology and for his popular science books. He has written several books, including *The Universe in Mind* (1985), *The Universe in Time* (1990), and *The Universe in Space* (1995). He has also written several articles for popular science magazines and has been a frequent speaker at public events.

Reeves is a member of the Académie des Sciences and the French Academy of Letters. He has received several awards, including the Grand Prix de la Recherche Scientifique (1985) and the Grand Prix de la Recherche Scientifique (1990). He is also a member of the French Academy of Medicine.



Jocelyn Bell Burnell (UK)

Professor of Astrophysics

Jocelyn Bell Burnell is a British astronomer and astrophysicist. She is best known for her work in the field of pulsars and for her discovery of the first pulsar. She has been a member of the Royal Society since 1985 and has served as its president since 2005. She is also a member of the Royal Society of Medicine and the Royal Society of Arts.

Biography

Jocelyn Bell Burnell was born on 10 June 1943 in Belfast, Northern Ireland. She studied at the Queen's University Belfast and the University of Cambridge. She worked as a research assistant at the Cavendish Laboratory and as a professor at the University of Cambridge. She has been a member of the Royal Society since 1985 and has served as its president since 2005. She is also a member of the Royal Society of Medicine and the Royal Society of Arts.



Silvia Torres-Peimbert (Mexico)

Astronomy Department, UNAM, Mexico City, Mexico

Dr. Torres-Peimbert has been a member of the TRAP research team since its inception in 1994. She has been instrumental in the development of the TRAP project, particularly in the area of data reduction and analysis. She has also been involved in the development of the TRAP software package, which is used for the reduction and analysis of TRAP data.

Biography

Dr. Torres-Peimbert received her Ph.D. in Astronomy from the University of Mexico in 1974. She has been a member of the TRAP research team since its inception in 1994. She has been instrumental in the development of the TRAP project, particularly in the area of data reduction and analysis.

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Ken'ichi Nomoto (Japan)

Department of Physics, University of Tokyo, Japan

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Biography

Dr. Nomoto received his Ph.D. in Astronomy from the University of Tokyo in 1974. He has been a member of the TRAP research team since its inception in 1994. He has been instrumental in the development of the TRAP project, particularly in the area of data reduction and analysis.

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Speakers



Reinhard Genzel (Germany)

Dependent from the Agency: 11 companies (50%)

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Biography

Professor Richard G. Carter was born on 21 March 1929 in Bad Homburg, Germany. He is a professor, Managerial Economics, at the Max-Planck-Institut für Wirtschaftsforschung in Cologne, Germany, and a professor, Marketing, at the Marketing Institute, a part of the Faculty of the Finance Department of the University of Cologne. Professor Carter is also a past president of the Association of the Free Trade Maximilian Institute, Munich, Germany.

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Jonathan P. Gardner (NASA)

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Biography

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David Southwood (ESA)

Chairman of the Board, with effect from 1 July 2004

David Southwood, FRS, is a British physicist and astrophysicist. He is currently a senior research fellow at the University of Warwick, where he has been since 1997. He was previously a senior research fellow at the University of Warwick, where he was a senior research fellow from 1997 to 2004. He was also a senior research fellow at the University of Warwick, where he was a senior research fellow from 1997 to 2004. He was also a senior research fellow at the University of Warwick, where he was a senior research fellow from 1997 to 2004.

He has been a member of the European Space Agency (ESA) since 1997. He has been a member of the European Space Agency (ESA) since 1997. He has been a member of the European Space Agency (ESA) since 1997. He has been a member of the European Space Agency (ESA) since 1997. He has been a member of the European Space Agency (ESA) since 1997.

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David Southwood was born in 1947 in Warwick, England. He was educated at Warwick University, where he obtained a first-class honours degree in Physics in 1969. He then worked for the Royal Observatory Greenwich, where he was a senior research fellow from 1970 to 1975. He then worked for the University of Warwick, where he was a senior research fellow from 1975 to 1997. He was also a senior research fellow at the University of Warwick, where he was a senior research fellow from 1975 to 1997. He was also a senior research fellow at the University of Warwick, where he was a senior research fellow from 1975 to 1997.

Exhibitions

Astronomy: crossroads of science and culture

This exhibition (15-19/24 January) commemorates the opening of the IAA2009 on 16 Jan. 1-10 January, 2010 and the 12th International Symposium on the Role of Astronomy in Culture and Society, which will take place at MUSE Observatory on 15 January, 2010. It will represent the first gathering of some 160 of astronomers and space scientists and will start and be displayed by astronomy.

Exhibitors

IAA2009 Cornerstone Project from Earth to the universe

National Aeronautics and Space Administration (NASA)

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European Organization for Astronomical Research in the Southern Hemisphere (ESO)

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Centre national d'études spatiales (CNES)

The World at Night (TWN)

Canada-France-Hawaii Telescope Corporation

initiative for the International Association of Dark-Sky Parks

The Institute de Astronomie de Curitiba

Starlight Initiative

Artist-in-residence

As part of the exhibition is being organized with the IAA Symposium 2009 "The Role of Astronomy in Society and Culture" (14-19 January), featuring exhibitions, paintings, photographs, videos, films and a variety of artists from around the world and displayed by astronomical phenomena.

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Social Programme

Thursday 15 January

Evening 19.30-21.30

Reception at the Palais de la Découverte

Video clip of "Around the World - Around the Sky" by Robert Pansera-Bessière (France)

Film of the Aster Planetarium presented by José Francisco Salgado (USA) with the music "The Planets" by G. Holst

Friday 16 January

Cocktail reception 15.00-19.30

Closing ceremony 19.30-21.30 (in French)

Cultural event "Six Films (presentation of the 11th Kronos Quartet with the participation of the UNESCO Group

Practical Information

Location and dates

The opening ceremony for the International Year of Astronomy will take place on 15-16 January 2009 at the UNESCO headquarters in Paris, France.

The address is

Maison de l'UNESCO
125 rue de Solferino
75 007 PARIS

Metro (subway)

- SEURIL station (line 10)
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Observatoire de Paris



CEA - Commissariat à l'Énergie Atomique



CNES - Centre National d'études Spatiales



ESA - European Space Agency



CFH - Canadian Flight Hardware



Région Île de France

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